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RAM SINGH DEL MAYO SCHOOL OF ART LAHORE

—JEYPORE ENAMELS—

AMONG all the examples of Indian enamelling, especially in gold, the works of the Jeypore artists are admitted to hold the first place. The South Kensington Museum contains a fine collection presented by the late Maharaja to the Prince of Wales.

Some beautiful specimens from Jeypore have been already illustrated in the JOURNAL OF INDIAN ART, accompanied by an admirable introduction from the pen of Surgeon-Major T. H. Hendley. These are only specimens of the large and valuable series of illustrations of Jeypore Enamels prepared by native artists under the superintendence of Colonel Jacob, which furnishes a complete conspectus of this exquisite art. The whole series will shortly be published as a separate monograph, which will portray the pure and exquisite colouring employed with harmonious taste by the enamellers.

The volume (in quarto imperial) will contain 23 illustrations, with descriptive letterpress. A limited number of copies will be issued to subscribers at £2 10s. per copy. Names of subscribers will be rectioned by

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BIDRI-WARE.

THE damascened work, known as the Bidri-ware, is a declining industry which deserves support to save it from extinction. This peculiar art-ware derived its name from the town of Bidar, its original home, which, according to tradition, was founded by a Hindu king of the same name, four centuries before the Christian era. The place lies about 75 miles to the north-west of Haidarabad, within the dominions of the Nizam. Bidar was long the capital of a Hindu kingdom of the same name, and after its subversion by the Muhammadans it continued to be the seat of government under the Bahmani Dynasty of the Musalman sovereigns of Deccan. It is said that one of the Hindu kings of Bidar invented the manufacture of Bidri-ware, who used the articles to hold flowers and other offerings which he daily presented to his household gods. Considerable improvements were introduced into the manufacture by his Hindu successors; but it attained its present state of excellence under the Muhammadans, who, wherever they went, not only gave great encouragement to the indigenous manufactures, but also imported from other parts of India, as well as from the chief seats of Musalman civilization in Western Asia, new arts and industrial crafts, so, like many other handicrafts of India, it declined with the downfall of the Muhammadan Empire, although it attracted the notice of men like Dr. Heyne, Dr. Buchanan Hamilton, Captain Newbald, Dr. Smith, and others. Its decline as an industry was so complete that, in the "Oudh Gazetteer," the most comprehensive work on that province yet published, no mention is made of Bidri-ware among the manufactures of Lucknow, although for more than a century it flourished most in the capital of Oudh. Much was done to encourage and promote this manufacture, so far as the European market was concerned, by the Department of Agriculture and Commerce in the North-Western Provinces. The exertions of the Department were greatly aided by the Exhibition at Melbourne, where Indian art-ware occupied a prominent place, and by the local exhibitions at Simla, Calcutta, and Jeypore, where Bidri-ware found an extensive sale.

The most ordinary articles of Bidri-ware are *Hukkás* or smoking bowls, *Surápis* or water-goglets, *Pikdáns* or spittoons, *Pándáns* or betel-cases, *Abkhorás*, or drinking cups, flower vases, tumblers, plates, trays, &c.

Hukká is the general name for the various kinds of appliances which the natives of India employ to smoke a prepared tobacco called *Guráku*. In many places the cocoa-nut shell is employed for the purpose, an imitation of which is made of wood, brass, or tin in North India, where, owing to the dryness of the climate, the actual shell does not last long. The two forms of *Hukká, Gurguri,* and *Farsi*, are generally made of silver or baser metals, in the decoration of which great ingenuity is often displayed. These two forms of smoking bowls are generally oval in the middle, with a flat round base, having a hole on the top into which the lower end of a tube, made of hollow reed and ornamented with coloured cloth and lace, is tightly inserted, and which serves the purpose of a pipe by which the tobacco is smoked. The two plates of Bidri-ware (plate 1) represent two specimens of *Hukká* sent to the Fine Arts Exhibition held in Simla in 1881. The water-goglet (plate 2), called *Suráhi,* is an article of extremely elegant shape, and is in great demand, but seldom put to any practical use. *Pikdán*, or spittoons are made of various shape and size, but are generally flat with a wide mouth. The *Pándán*, or betal-case, is an article indispensable to well-to-do natives, who keep in it the leaves of *Piper Betel,* sliced areca nut, lime, cardamom, and other spices, which many of the eastern nations chew with or without tobacco leaf. The *Abkhora* is a small water vessel with a wide mouth. For European use, flower vase, tumbler, cup and saucer, plates of various sizes, trays, salt-cellar, and other articles are made.

At present, the four chief seats of Bidri manufacture are Bidar itself, Lucknow in Oudh, Purniah, and Murshidabad in Bengal. The mode of manufacture is very nearly the same in all the places. The first process is the preparation of the mould. A quantity of clay, or very fine dust made into a sort of paste by mixing with it fresh cow-dung, is put on a rude lathe, and when dry turned into the required shape. A layer of wax and oil boiled together is then put upon it, and the whole

thing when dry is again turned in the lathe in order to make the surface even and smooth. It is next covered with another layer of clay, and then allowed to dry. Two openings are then bored in the mould, when it is subjected to a gentle heat, which bakes the clay and causes the wax to melt and run out through the holes, leaving a vacant space inside for the reception of the fused metal. This is an alloy of copper and zinc, the proportion in which each metal is used varying in different places. At Bidar, the proportion, according to Captain Newbold, is one of copper to sixteen of zinc, while, according to Dr. Smith, it is one of copper to four of zinc. At Purniah the proportion observed is 9 of former to 176 of latter. In Dr. Buchanan Hamilton's time, the several ingredients used were zinc 13,360 grains, copper 460 grains, and lead 414 grains. Dr. Heyne also saw the use of lead in forming the composition. He states that ordinarily the manufacturers take at a time 16 ounces of copper, 4 ounces of lead, and 2 ounces of tin, which they melt together, and then after adding 16 ounces of zinc to every 3 ounces of the alloy thus formed, melt again. Lead is not used now, and tin still forms a component of the alloy at Murshidabad. At Lucknow. besides the usual copper and zinc, steel powder is added to give additional strength to the compound. The proportion is copper 4 ounces, steel powder 4 ounces, and zinc 12 ounces. Thus, no hard and fast rule is observed in the proportion to which the different metals are used; the manufacturers of each place employ what they have found most suitable from long experience. To mix the two metals now generally used, viz., zinc and copper, two earthen crucibles are made, one large and the other small. A thin coating of fresh cow-dung is put upon them, both inside and outside, to prevent their cracking when put on fire. The zinc is put in the larger crucible and the copper in the smaller, and both are then put into a small pit, where a slow fire, generally of cow-dung cakes, has been made. They are then covered with fresh fuel, and the heat gradually increased with the aid of a pair of bellows or by blowing through a bamboo tube. When the metals have fused, the melted copper is poured into the crucible containing the melted zinc, and the heat now applied with a renewed force, which causes the metal to unite and to form the compound of which Bidri-ware is made. Dr. Buchanan Hamilton states that to prevent calcination, a mixture of beeswax and resin, obtained from the *Sál* tree (Shorea robusta), is thrown into the crucible. When thoroughly fused with each other, the molten alloy is poured into the vacant space inside the mould through one of the two openings described above. When cool the rough model of the required vessel thus formed is taken out by breaking the mould. It has now a dull leaden appearance, is hard, but can be easily worked in a lathe to make the surface smooth and even. The smelting, moulding, and turning up to this point are done by a set of people generally of the brazier caste, who next pass on the vessel to the designer to trace upon it patterns of flowers and other ornaments. The designer first smears the vessel with a solution of sulphate of copper, to give the surface a black colour. This operation assists him to see distinctly the patterns which he etches on the smooth surface with a small steel point, and the carver to follow the tracings made by him. The vessel next passes on to the engraver or carver, who, following the lines traced by the designer, cuts them deep, and scoops out the designs with delicate finely-pointed chisels of various sizes, worked by a small hammer. The surface now looks very indented and rough, and requires a little smoothing down with a blunt chisel, before it is fit to receive the inlaying. Both gold and silver are inlaid to decorate the Bidri vessels, and in Bidar copper is also sometimes used. Thin plates of gold or silver are laid on a bed of wax and resin, which prevents their moving about, and serves as a glue when pressed on the ground work. A small piece of paper is next inserted into the cavities, made on the surface of the vessel, to take an impression of the excavated pattern. It is taken out and placed on the gold or silver leaf, which is cut into the exact measure thus obtained, and the piece then taken up by the top of the finger and the chisel, placed on its corresponding cavity, to which it is firmly inserted by a steel point, and gently hammered in. The inlaying is more or less durable according to the depth to which the plate is fixed, and the value of the article depends upon the thickness and quantity of the precious metals used, and the degree of finish displayed in the execution of the patterns. Very thin leaf is used for the ordinary kinds, while in the more durable workmanship, gold or silver wire is employed. When the inlaying has been performed all over the surface in the manner described above, the hole in the bottom of the vessel left in the place of the opening through which the molten alloy was poured into the mould, is closed with lead, and the whole surface smoothed and polished with a common file and a scraper. In Purniah this cleaning is effected by rubbing the surface with shell-lac and powdered corundrum, and lastly with a piece of charcoal. Next comes the final process, that of giving a permanent black colour to the surface. This operation is performed at Bidar by the application of a paste made of salammoniac and saltpetre, ground up with brackish water. At Purniah, the mixture is composed of four parts of salammoniac, one of unrefined nitre, and five of rough saltpetre freshly collected, the whole being moistened with rape-seed oil, to which a little powdered charcoal is added, while at Murshidabad the composition used consists of saltpetre, salammoniac, blue vitrol and nitrate of potash, finely powdered and mixed with water. The article to be coloured is first subjected to a gentle heat, and then thickly smeared with the paste, which is allowed to lie upon it for hours. When dry, it is washed and thoroughly cleaned with water or with the aid of sweet oil, and the Bidri-ware is now ready for sale. The process of colouring imparts to the surface a permanent dead black hue, which, however, does not affect the parts where the ornaments are laid,

but rather enhances the lustre of the white silver or the yellow gold in contrast with the black ground. Bidri-ware is not liable to rust, does not dint under the blow of a hammer, and breaks only when thrown down from a great height or struck with violence. Captain Newbold states that he witnessed at Bidar the whole process of inlaying, and "could not help admiring the precision, the lightness of touch, and celerity with which it was performed."

The patterns are generally of a floral description, more or less natural at Bidar and conventional in Upper India. In Purniah, the ornaments are sometimes of a Chinese character, which Sir George Birdwood supposes to have been introduced by way of Sikkim or Bhutan. In Lucknow, the figure of a fish is frequently introduced among the floral decoration to suit the taste of the Muhammadan gentry of the place. This device had its origin in the fact that the late kings of Oudh, occupying the foremost rank among the nobility of the Delhi Empire, delighted in parading their "Dignity of Fish" *(Máhi-murátib)*, which consisted of the privilege of carrying before them in all state processions the representation of a fish, made of metal and borne upon a pole, with two circular gilt bells attached to it. This mark of distinction was formerly bestowed only on nobles of the highest order, and the last occasion on which an Emperor of Delhi exercised the privilege of conferring this honour was when Shah Alam bestowed the dignity on Lord Lake. The kings of Oudh displayed this dignity not only in its legitimate form, but employed the fish as an emblem of their high position in arts as well as in decorative architecture, and the figure of a partly natural, partly conventional fish has found its way among the patterns with which the Bidri manufacturers of Lucknow adorn their ware.

Two kinds of ware are made in Purniah: the best called *Gharki*, in which the patterns are deeply set and well finished; the other called *Karná-bidri*, in which the patterns are plainer and inferior in finish. A modified form of Bidri-work, called *Zarbuland* is made at Lucknow, in which the patterns are slightly raised and not set even with the surface as in the ordinary Bidri-ware. This is an imitation of the many kinds of copper and brass ware, specially those of Tanjore in South India, in which the white silver designs stand in relief on the red or yellow ground of the copper or brass vessels. The process followed in the manufacture of *Zarbuland* ware is nearly the same as that for the ordinary Bidri, except instead of excavating the patterns for the reception of the gold or silver plates, the ornamental designs are raised above the surface and chased. Occasionally gilt silver, instead of the genuine article, is used in covering the patterns of *Zarbuland* work.

As may be seen from the description, the manufacture of Bidri-ware is carried on under a system of Division of Labour, the different processes being generally performed by three classes of people, viz: the moulder, the carver, and the inlayer. The moulder prepares the alloy, casts the vessel and turns it to its proper shape with his lathe. The carver engraves the patterns on the surface of the vessel, and the inlayer designs the patterns, inlays the ornament of gold and silver, and finally colours and polishes the article.

As stated before, the four notable seats of Bidri manufacture are Bidar, Lucknow, Purniah and Murshidabad. It is not known when the art was brought into Lucknow and Purniah, but its manufacture at Murshidabad dates from the commencement of the present century, when it was introduced by one Mir Ilahi Bakhsh. This Ilahi Bakhsh had an apprentice named Lochhmi, whose son Munna Lal, introduced many improvements in the manufacture, and at the time of his death, forty years ago, left the industry in a very flourishing condition. But the district authorities state that it is now slowly perishing for want of encouragement. At present, the manufacture is almost entirely in the hands of Muhammadan artizans, who are eight in number, including a female named Ladu. At Bidar the trade is in the hands of Hindus of the Lingayet sect. At Purniah four families of the Hindu brazier caste (Kansaris) are engaged in moulding and turning Bidri-ware, who live at Bellori, a village four miles from the civil station of Purniah. The rest of the processes is performed in the old town of Purniah by several Hindu casts, such as the Sonars (gold-smith), Dhanuks (labourers), and Sunris (wine-sellers), as well as by Musalmans. At Lucknow the trade is in the hands of Muhammadans, who employ the braziers to caste the mould and artizans to perform the rest of the work. In 1881 there were 13 men engaged in Bidri manufacture in the town of Lucknow, who turned out ware of the estimated value of Rs. 4000. Next year the number of manufacturers increased to 31, and the value of the work to Rs. 4500.

At Lucknow, where labour is comparatively cheap, the artizans engaged in Bidri manufacture are paid by daily wages at the rate of 6 annas or 7½d. per day, and the employer in selling the articles turned out, charges a profit of 25 per cent. on his capital. At Purniah the braziers mould the vessels on their own account and sell them to the inlayers. They purchase 5½ lbs. of zinc for a rupee (1s. 8d.), and 4½ ounces of copper for 4 annas (5d.), and sell the vessel or vessels made from this material at Rs. 2 (3s. 4d.), thus making a profit of 1s. 3d. The inlayers have no fixed rate of profit.

The largest collection of Bidri-ware ever brought together from all the four seats of manufacture, was perhaps that at the late Calcutta Exhibition (1883-4). Of the articles sent from Bidar by the Haidarabad State authorities, the most notable were a tea-poy, price, Rs. 195; a large spittoon, Rs. 125; a wash-handbasin, Rs. 55; five goglets, from Rs. 16 to Rs. 30; eight flower vases, from Rs. 22 to Rs. 45; eight trays, from Rs. 5 to Rs. 24, &c. Of ordinary Bidri-ware brought from Lucknow, the price of a *Hukká* varied from Rs. 6 to Rs. 85; a glass with saucer and cover, Rs. 42; a spittoon, Rs. 25; a plate, from Rs. 8 to Rs. 44. Lucknow also sent a large collection of articles of the

raised pattern (*Zarbuland*). The price of some of the typical specimens may be given as follows:—A goblet, Rs. 14; a betel-case, Rs. 21; a spittoon, Rs. 35; a *Hukká*, Rs. 6 to 20; a wine-glass, Rs. 4; a cup with cover and saucer, Rs. 40; a glass with ditto, Rs. 30; a plate, Rs. 22. The exhibitors and manufacturers were Husain Ali, Muhammad Ali Beg, Bullan Beg, Mehdi Husain and Muhammad Ali. Of late years these men have acquired a wide reputation in this branch of art-industry. Murshidabad sent only three articles, of which the best specimen was a *Hukká* with patterns worked in gold and silver, made by Gopal Shah, price Rs. 30. Purniah sent about a dozen specimens, of which eight were *Hukkás*, price varying from Rs. 25 to Rs. 40, and one water goglet, Rs. 11.

TRAILOKYA NATH MUKHARJI.

RUSTIC ORNAMENTATION.

IN a previous number under this heading the clay modelling in the interior of the houses or huts of Sikh and Muhammadan Jat peasants was noticed. Traces of a feeling for design are found in the implements used in the field as well as on the walls of the home. There is naturally but little scope for this inclination in farm tools, and some of the more picturesque forms of country carts, for example, which offered opportunities of which the village carpenter and the women of the household used formerly to avail themselves, by covering them with an elaborate garniture of iron and brass, with bold *appliqúe* embroidery for roofs or tilt covers, are passing out of use. A sketch is given of a winnowing shovel from the Rawal Pindi (Punjab) district. It may not be of the first importance that an implement used merely to toss the trodden out corn and chaff against the wind should be ornamented, but the village carpenter has satisfied his sense of æsthetic propriety by giving it an elegant form and adorning it with a pleasing bit of incised ornament. Another sketch shows a *jindra* or ridging-board from the Punjab frontier. This is used to throw up the *wuts* or small dykes with which, for the convenient distribution of water, the fields are intersected. A common form in other parts is a sort of long and shallow toothed shovel, which, like the present, is worked by two or three men, one or two to haul on ropes fastened to rings in front, while one guides the handle from behind. The wood in the present instance is moulded to an agreeable and probably serviceable shape, while the notching, though of a rudimentary type of ornament, is applied in the right place. These traces of refinement, evident also in the turned wooden seed-cup applied to the plough when it is used for sowing, are curious, as occurring among races so generally careless of neatness as are the stalwart, heavy-handed peasantry of the Punjab. A third sketch shows the painted stern of a boat on the river Beas (Punjab). The craft in use on the rivers in the greater part of India are necessarily flat-bottomed, and the vernacular for boat—*kishti,* means also a tray. On some rivers the stern is so much elongated and raised as to suggest that it may be useful as a sail. In the present instance stern and stem were very much alike. The decoration is incised and painted in red, yellow, green and white. Boatmen all over the world seem to delight in a few touches of bright colour, and it must be confessed that the somewhat rude decoration of a group of Punjab boats when seen with their natural surroundings of tall, white plumed reeds, level stretches of the shallow river and grey low-lying land, have a brightness of effect, of which the present sketch only gives a faint impression.

JAPANESE AND INDIAN LACQUER.

THERE is in India a popular misconception as to the nature of Japanese lacquer, which is by many wrongly supposed to be a variety of shellac, similar to the surface of articles turned in the Indian lathe, and familiar to all in the shape of Benares toys, Sind boxes and the like. The Japanese lacquer is a true varnish, being the gummy sap of the *Rhus vernicifera;* a species of sumach somewhat resembling the ash in its bark and foliage. For more than a thousand years the cultivation of this valuable tree has been fostered by imperial edicts, either commanding the plantation of a given number, or authorising the payment of taxes in its produce. It grows all over the Main Island, but flourishes principally northwards from Tokio, from which districts come 70 to 80 per cent. of the total yield, which averages about 120,000 to 140,000 gallons per annum. The trees, which require no care beyond keeping them free from being choked by weeds in their sapling stage, are tapped when about three years old, in order to improve their growth. They are not, however, tapped for market until they are ten years old. Those of fourteen or fifteen years growth are said to yield the best quality of sap, but patriarchs of a century or more, which are becoming very scarce, give the best material for transparent varnish, their sap being more glutinous and possessing more body. Their existence was due to the berries being a more profitable commodity, until the introduction of kerosene caused the demand for this vegetable wax to decline. Trees do not survive the tapping, but roots of young trees throw up shoots, which grow in a few years into profitable saplings. The sap is drawn in the summer rains, commencing in July, and the season lasts till September ; the product, however, in the different months varies in quality and in name. The sap taken from the growing tree is termed *ki-noushi.* From the branches lopped off young trees, as well as from old trees which have been felled, *ki-seshime,* or branch lacquer, is expressed, and is distinguished from the former in its application as in its name. Thus in making gold lacquer, *seshime* from young trees, which is a scarce product, is used in the proportion of seven parts to three of foreign matter. It appears, however, from the exhaustive researches of Consul Quin, who is our chief informant, and has left nothing to be discovered except the jealously guarded trade secrets of the lacquer manufacturers, that the ordinary *seshime* employed is a composition which comprises grated sweet potatoes, sea-weed jelly, and soot. The best quality of crude lacquer is of a creamy consistence and colour, and if exposed to the sun for a few days without the usual addition of water, becomes nearly black and translucent, and will not dry. An admixture of water restores the creamy colour, though somewhat darkened, and after evaporation the lacquer will dry and turn black. The great desideratum of the workers in lacquer is a clear, transparent varnish. That which is so called is really black, and must be ground and polished before a brilliant surface can be secured. Another want is that of extending the very limited choice of colours which can now be employed, the action of the lacquer being destructive to all vegetable colour, which simply disappears.

How elaborate are the processes through which the best finished article in black lacquer passes can be roughly estimated from the fact that thirty-three different operations are enumerated. Twenty applications of various preparations of lacquer are given, involving drying periods varying from twelve to forty hours, except in what may be termed the halfway stage, when at least three days drying is necessary. The whole time aggregates about fifteen days. When the surface of the article to be lacquered has been duly smothered, a groove is cut along each joint, and the surface receives a coat of *seshime.* The next step is to fill in the grooves with finely cut hemp mixed with glue and paste, which requires at least forty hours to dry. Then follows a coat of paste formed of burnt clay from Mount Mari, branch lacquer, and sufficient water. When the dry surface has been only smoothed with a white whetstone, a mixture of wheat and branch lacquer is applied, and a hempen cloth is stretched over it with the utmost care, to avoid wrinkles or edges. Smoothness is further secured by paring or planing the hardened surface of the cloth. Six successive applications of slightly differing compositions of lacquer and burnt clay follow in order. This is next ground smooth with a whetstone, and receives a hardening coat of branch lacquer followed by *sabi* or the clay paste. After the repetition of the whetstone and two painting processes the surface is ground with magnolia charcoal. Successive coatings of thinly applied branch and of *Ro,* a black lacquer, leave a surface to be polished with charcoal made from Lager-strœmia Indica. Another coat of *Ro* is then rubbed on with cotton wool and rubbed off again with soft paper. In the next stage a fine polish is produced by applying, with a cotton cloth and a little oil, powdered burnt clay from Mount Mari and calcined deer's horn ashes in equal proportions. This polishing alternates with two coats of lacquer, the final polishing being given with the finger to the surface until the most brilliant effect is produced. The drying press is constructed of rough unplaned boards ; the inside being thoroughly wetted is then carefully

closed to exclude the air, as lacquer possesses an unexplained property of drying only in a damp, close atmosphere, and will not harden in the open air, but will run and always remain sticky. The process of making red lacquer is somewhat shorter, the vermilion *seshime* being applied after the rubbing with magnolia charcoal, and the surface is then polished with cotton cloth and the powder.

There are three styles of gold lacquering, the first of which, called *Hira-makiye* or flat gold lacquer, is applied to an article painted in either black or red. A picture drawn on thin paper sized with glue and alum is applied to the surface. The reverse has been smoothed with a pebble or shell, and the outline lightly traced with lacquer roasted over charcoal, the brush employed being a very fine one of rat's hair. The paper is rubbed with a whalebone spatula, the result of which is to produce a faint impression of the drawing. This is brought out more plainly by rubbing with cotton wool powdered with white whetstone or tin. One tracing will give twenty impressions. The pattern is then filled in with branch lacquer mixed with red oxide of iron, and gold dust is scattered with a horse-hair brush until the lacquer will take no more. twenty-four hours' drying is then required. A thin coating of transparent lacquer is laid over the gold, and after being dried for twenty-four hours the surface is more carefully smoothed with camellia charcoal and finally polished by the finger with oil and burnt clay. The fine work, such as veining leaves or painting the stamens of flowers is then done with lacquer sprinkled with gold dust. Drying and polishing complete the finish, additional processes, which are only repetitions, being required for the finest work. It is needless to say that more ordinary kinds of flat gold lacquer are manufactured with considerable saving of time and trouble. For "raised gold lacquer" or *Taka Makiye* the first and second processes are the same as in flat lacquer, but finely powdered camellia charcoal is applied instead of gold dust, according to the requirements of the pattern. When dry a soft rag removes any loose charcoal powder, and the article is carefully washed with a brush, which for the best work is made of human hair. Branch lacquer with camphor is then rubbed on and a coating of *Sabiko* applied. The surface, when dry, is ground smooth by successive applications of the two charcoals already specified. Then come two or more coatings of a mixture made of black lacquer, *Ro* and lacquer to which water that has been used with a whetstone, together with powdered turpentine has been added. Camphor and powdered charcoal are stirred into the pan of the mixture, which is boiled. The applications of this mixture are regulated by the height needed to bring out the details of the landscape represented, the pattern being worked out at this stage. The remaining processes including lacquering, drying and polishing, prepare the way for the application on a coat of groundwork lacquer of the gold powder either brushed or shaken over the surface. The article is finished off in the same manner as the flat gold lacquer already described. There is a third style called "bringing out by polishing," in which after the application of the design to the plain lacquered article, a coat of black or transparent lacquer is given, which when dry is ground down by magnolia charcoal till the pattern stands out. The final polishing completes the work.

The time required for producing the more elaborate specimens of lacquered ware can be instanced by a tobacco box wrought for the Empress, in which the three styles of gold lacquer—namely, the flat, the raised, and that termed "bringing out by polishing" were all employed. The box only measured ten inches in length by six in depth and eight in height, but over eight months were spent in its production. Nowadays in this, as in so many other artistic handicrafts, the change in the value of time militates against the artistic perfection formerly attainable.

The great artists of ancient times hold as high a place in the annals of Japan as great painters in the art history of Europe. From the twelfth century there is a succession of illustrious names; but there are extant articles which were manufactured in the seventh and eighth centuries, while the earliest mention of lacquer is in the fourth century, but gold lacquering is held to have been at its zenith of perfection about 1175 A.D. The various styles, though only slightly differing, are distinguished by names derived either from their introducers or their appearance, and are reckoned to exceed two hundred and twenty-five.

The famous *Vernis Martin*, of which many species still survive in France, made by Martin, a Parisian carriage painter, about 1700, was supposed to be wrought with Japanese varnish, brought to Europe by Japanese missionaries. Good carriage panel preparation, as practised in Europe, approaches closely to the Japanese practice, but the best of it is not to be compared with fine Japanese lacquer, of which there are authentic specimens several hundred years old in perfect preservation.

India is behind hand in most painting and varnishing processes. It is perhaps not generally recognised that in this respect the arts of the East generally are in the state of those of Europe before the time of Van Eyck. The ordinary powers of linseed oil are unknown, and painting, whether pictorial or decorative, is in water-colour, protected by resin varnishes. But, while the Japanese possess a varnish of unique properties, the Indian artizan is limited to sundras or East Indian copal, mastic, rosin and shellac; and, except when working under English coach-builders, it has not entered into his mind that many successive coats of varnish may be laid, rubbed down and polished until a fine surface is attained. If some of the best Calcutta carriage work had only an English climate to withstand, it would probably last as long as that of Long Acre; but it is done under European superintendence, while if left to himself the native artificer is content to apply his *rangan* with the palm of his hand, and to leave it with its natural sheen, so that from the Japanese or English mechanics' point of view it is more of a smear

than a polished body of varnish. The preliminary processes before the application of varnish are those in use everywhere. Wood surfaces to be painted in water colour are treated with a ground of brick dust or inferior white earth (there is no good whiting in the country) and glue, or tinfoil levigated with glue or covered with shredded hemp or cloth, while embossed work for gilding or treatment with tin and yellow varnish to simulate gold is loaded up with a brush in glue and white earth. The old ceiling work of the Punjab, the lacquered panels of Hyderabad, Deccan, and the bed-legs of Rajputana and Delhi are examples of this last method. There is never any rubbing down of the varnish, though stones are used with water to smooth glue or gum laid grounds.

There is, however, one notable exception to the general rule of ignorance as to Japanese processes, which is so curious that it is mentioned here in the hope that further research may bring out other examples. Mr. Walter Lawrence, C.S., writes :—

"In Shahpura, a small Rajput State of the Sesodia family, there are made some very beautiful lacquered shields by a family of artizans at the capital. Old workmanlike shields which have done duty in the desert of Marwar are bought up for three rupees apiece and brought over to Shahpura, where they are carefully soaked and worked up for the lacquer process. It is said that some 60 coats of varnish are applied to each shield, and that it takes a year to finish one. The people of Shahpura know little of how the ancestor of the lacquer family came to their city, but they have a legend that he came from the East, and that he was not a countryman of Hindustan."

There are to be seen in Mr. Lawrence's possession two or three of these Rajput shields bearing unmistakable traces of Chinese or Japanese influence. The gold lacquer, the iridescent lacquer, slightly embossed foliage and creatures; in short, all the known varieties are attempted. The designs are a curious jumble of Chinese and Indian notions, but the surface is not equal to that of Japan, as the workmen probably use the ordinary varnish of the country. The rubbing down and re-varnishing over and over again is systematically practised no where else in India, and it would seem probable that the art was introduced originally by a wandering Chinese artist, perhaps one of the many Buddhist pilgrims who in former times came to India overland. It may be that in other parts of the country varnish is treated in this Japanese fashion. So far, however, as our present information goes, the Shahpura shields are unique, both in their design and the manner of their execution, and we would be glad to hear of any similar work produced elsewhere.

The word lacquer as applied to Japanese varnish and Indian shellac is somewhat misleading to the untechnical mind. We are in the habit of describing the ordinary shellac coloured wood turnery of India and the Burmese ware with a basket work basis as lacquered. A lacquer would seem to mean a fluid varnish applied with a brush and set aside to harden, either in a stove, as in Birmingham, or in a damp press as in Japan. Indian lacquer, so called, is merely the surface obtained by pressing a stick of hard shellac, coloured *ad lib*, to a rapidly revolving wooden object. The friction developes heat sufficient to make it adhere irregularly; The end of a dry palm leaf stem cut chisel-wise, and applied in the same way, melts it still more and spreads it equally, while a drop of oil applied with further friction with a bit of rough muslin polishes the surface, which is as hard and good after ten minutes' work as it can ever be. It lasts, too, fairly well; but being only shellac and colour after all, it is not to be compared with Japanese lacquer, in some specimens of which it is credibly reported water can be boiled without injury to the vessel, and which never seems to scale or peel off. It might be worth consideration whether some confusion would not be avoided by the adoption of the phrase, "lac-turnery," to distinguish the common Indian ware from the lacquered or varnished surfaces. Sind boxes are turned and covered with shellac, while the decorated trays and panels of Hyderabad, Deccan, are lacquered in the true sense. At present Indian catalogues describe most glossy surfaces as lacquered.

It may be noted that linseed oil is gradually coming into use for oil painting and for varnishes, mainly through the instrumentality of the various railway workshops established in different parts of the country. A large quantity of English varnish is imported and sold in the more important towns, but in purely indigenous trades the practice is still for each workman to prepare his own varnish at a considerable expense of time and labour, and with much uncertainty of result.

A SIKH OFFERING.

AN interesting illustration of the reverence paid by the Sikhs to their sacred books wherever they may be, recently occurred. A rare Gurmukhi MS. of the Janam-Sakhi, containing the life of the great Guru Baba Nanak, which belongs to the India Office Library, was recently lent to the Government of the Punjab for the inspection of the Lahore Sikhs. This MS. had been used by the late Dr. Trumpp, whose premature death has been recently mourned by all Oriental students, in his great edition of the Adi Granth. When the MS. arrived it was accompanied by two magnificent coverlets such as are used in the *Darbar* or Golden Temple of Amritsar to envelope the volume of the Sikh Scriptures, which is there the object of adoration. One of the coverlets is a fine example of the curious embroidery of gloss silk upon cotton, called *Shishdar phulkari*, of which manufacture Lahore is the head-quarters. The other intended for the external covering is a fine Benares kincob, heavily bordered with gold and silver tinsel, and lined with Amritsar silk. There were offered by the Sikh community with a petition that they might be employed to cover the sacred biography of their great founder.

THE CHITTAGONG HILL TRIBES.

THE manners and customs of the "Wild Tribes" which inhabit the Chittagong and the other south-eastern hilly districts dependent on Bengal, have been partially made known by the work of Major Lewin. It was reserved for an enterprising German traveller, Dr. Riebeck, to succeed in giving adequate pictorial illustrations of the Maghs, the Kumis, Lushais, Chakmas, and the natives of Tipperah. An English version of Dr. Riebeck's work, by the well-known ethnologist Professor Keane, has been published by Messrs. Asher. The illustrations, which have been executed in Berlin, call for the greatest praise to the energetic and dauntless collector, who overcame the perils of fever and the prejudices of the wild aborigines, and succeeded in obtaining ample materials for the work. The anthropological characteristics are presented in a series of photographs. To us the most interesting pages are those devoted to the dress and decorations, the arms and implements of the hill tribes. The patterns of the native woven cloth, dyed with natural colours, of which the sufficient but scanty garments are made, are most naturally reproduced. In these pictures as given it is difficult to trace an exact line of tribal demarcation. The colours employed by the Maghs are more brilliant. The bordered goung boung or turban with its orange and its red, which adorns the heads of the women, is particularly bright. Dr. Riebeck secured a great prize by barter in the head-dress of the Lushai Chief Pakhoma, which deserves to be fully described. "The central piece is formed of a headband or hoop of bamboo strips plaited together, over which are plaited strips of red and yellow orchids, with which strips of tin are intertwined; at the back of this hoop are attached two fans tied together, consisting of bamboo sticks with bright attachments. The latter are formed of black cotton cords strung with pearls and finished off with tufts of pigeon's feathers as tassels. In the hoop porcupine quills are inserted, to which are fastened the tail feathers of the *palæornis* tipped with pigeon's feathers."

To all who study the ethnology of art and delight to trace the connection between the primitive forms such as these Hill Tribes preserve, and the later developments both of beauty and skill, this publication will be welcome.

THE EXHIBITION OF 1886.

THE first public meeting of the members of the Royal Commission appointed to organise and carry out the Indian and Colonial Exhibition, took place on March 30. The President, H.R.H. the Prince of Wales, in one of his accustomed lucid and able speeches, described the arrangements present and prospective, and announced that the guarantee fund, to which the Government of India promises £20,000, includes a total of £128,000. It will be well if all concerned act up to his Royal Highness' ideal of the project, which "is essentially one of a National and Imperial character, differing in this respect from former exhibitions, in which the elements of trade, rivalry and profit largely predominated." The names of those members of the Royal Commission, and the officials both in India and at home who represent India, are warrants for the faithful carrying out of the application of these views to the proper and worthy display of the arts of India. The words of the Secretary of State for India, who claimed to have the Exhibition much at heart, deserve to be recorded :—

"There is, perhaps, nothing more desirable for India than that its products and industries should be well known in this country, although we have much more to learn from than to teach them. Their beautiful manufactures which they have produced for so many ages have proved that there is a knowledge of many branches of art which it would be a thousand pities should be diminished under our rule. I have often been struck with the calamity of the introduction of our taste into Eastern arts and manufactures, for their taste is far better than ours, although we have no doubt engineering knowledge and skill and the command of capital; and I cannot conceive of any advantage greater than that the two countries should be brought together. The Government of India will undertake the collection and management to a great extent of what is to be sent to this country. You will see from the immense size of our Indian Empire, and the position of the Government there, that it is much better this should be taken in hand by the Government."

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W. Griggs Photo-lith. London. S.E.

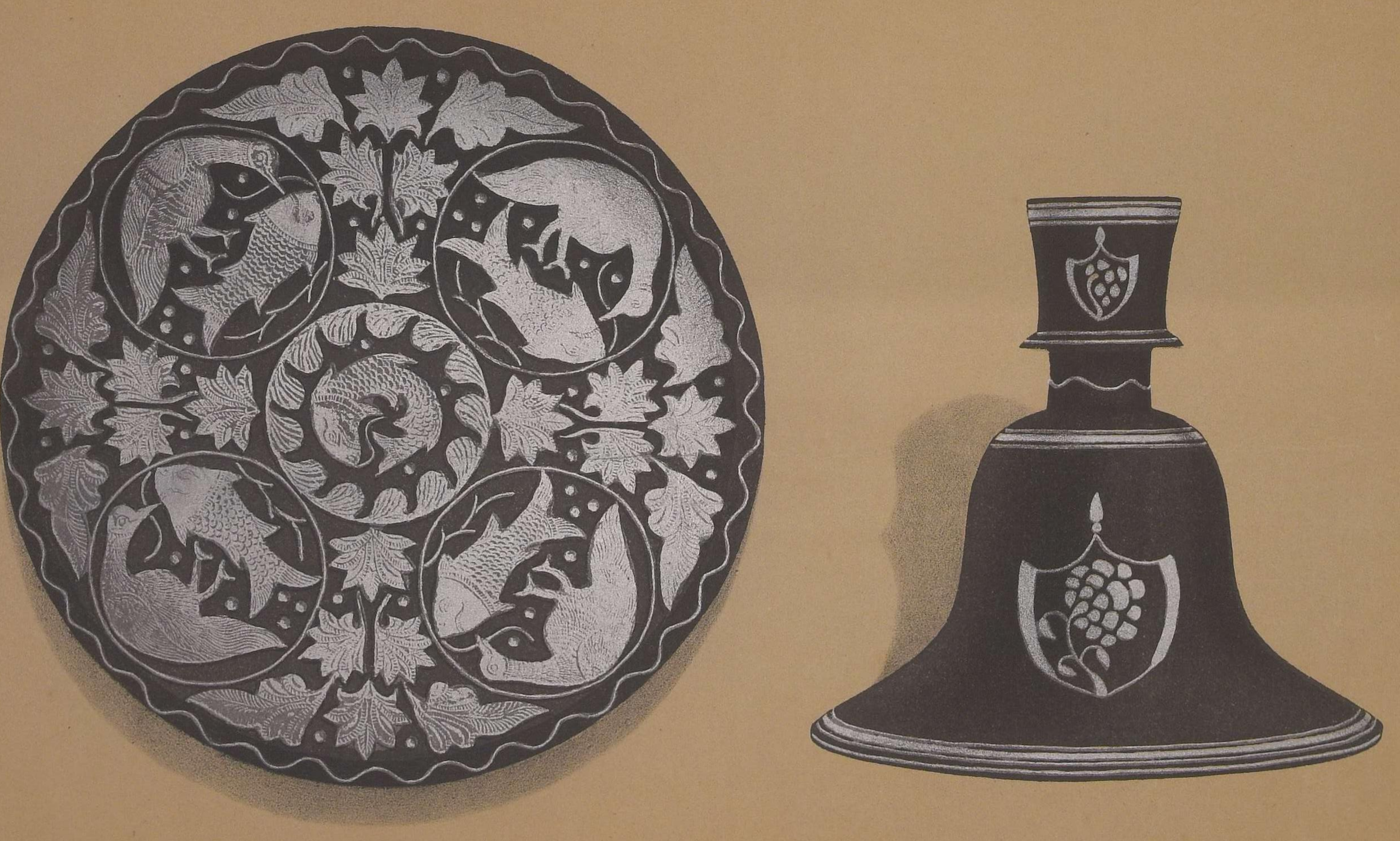
BIDRI-WARE WORKER. LUCKNOW.

SURAHI WITH LID AND CHAIN, GOLD RAISED ENAMELLED. LUCKNOW.

MUHAMMAD ALI, ENAMELLER.

W. Griggs, Photo-lith, London, S.E.

PLATES, SILVER ENAMELLED. LUCKNOW.
MUHAMMAD ALI, ENAMELLER.



PLATE, SILVER RAISED ENAMELLED, AND HUKKA-BOTTOM SILVER ENAMELLED.
LUCKNOW.

MUHAMMAD ALI, ENAMELLER.

E.13594

W. Griggs Photo-lith, London, S.E.

SURAHI, GOLD RAISED ENAMELLED. LUCKNOW.

MUHAMMAD ALI BEG, ENAMELLER.

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PLATES, SILVER RAISED ENAMELLED. LUCKNOW.

MUHAMMAD ALI BEG, ENAMELLER.

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PLATES, GOLD AND SILVER ENAMELLED. LUCKNOW
CHANDOO, ENAMELLER.

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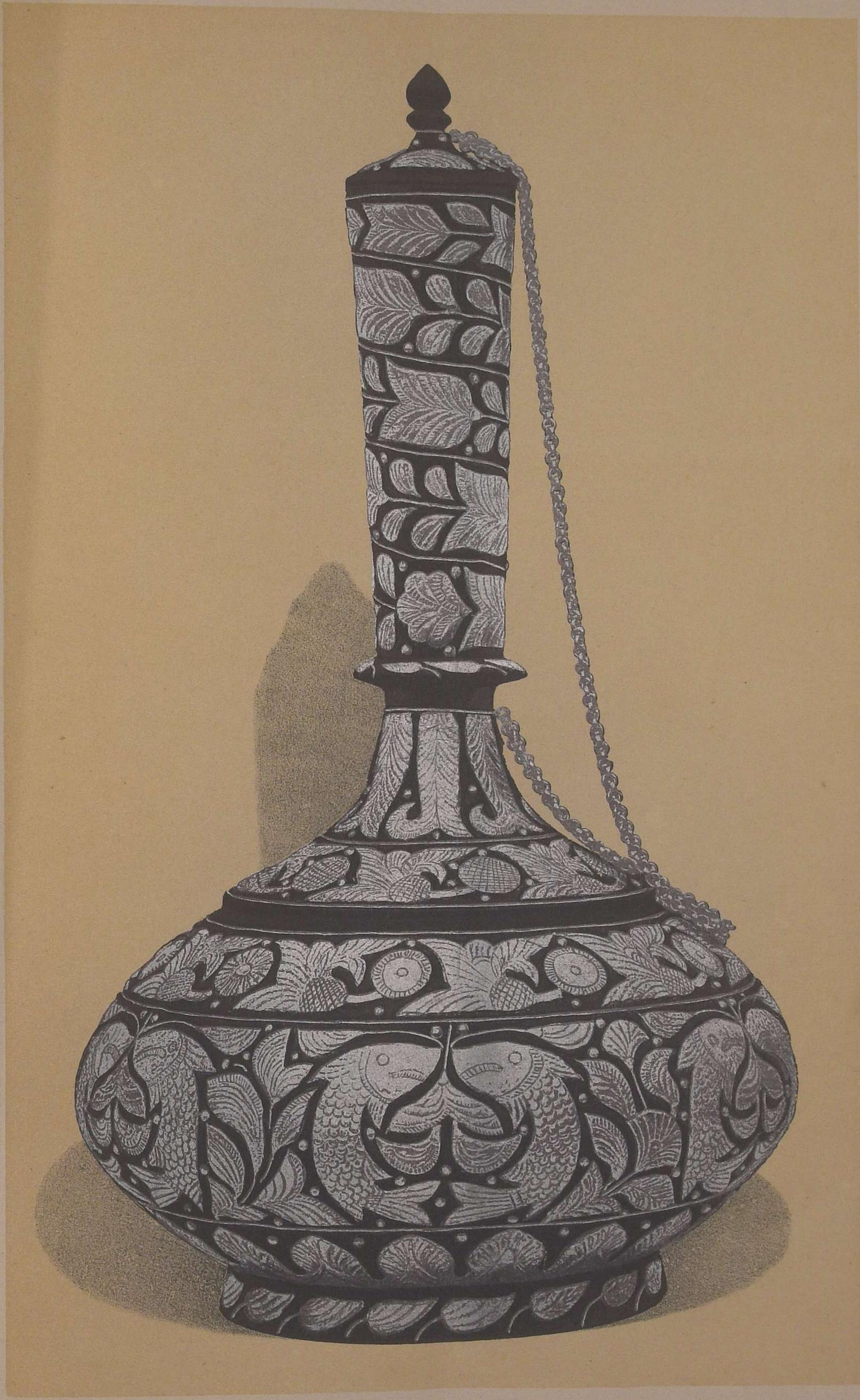
HUKKA BOTTOM AND PLATE, SILVER ENAMELLED. LUCKNOW.

CHANDOO, ENAMELLER.



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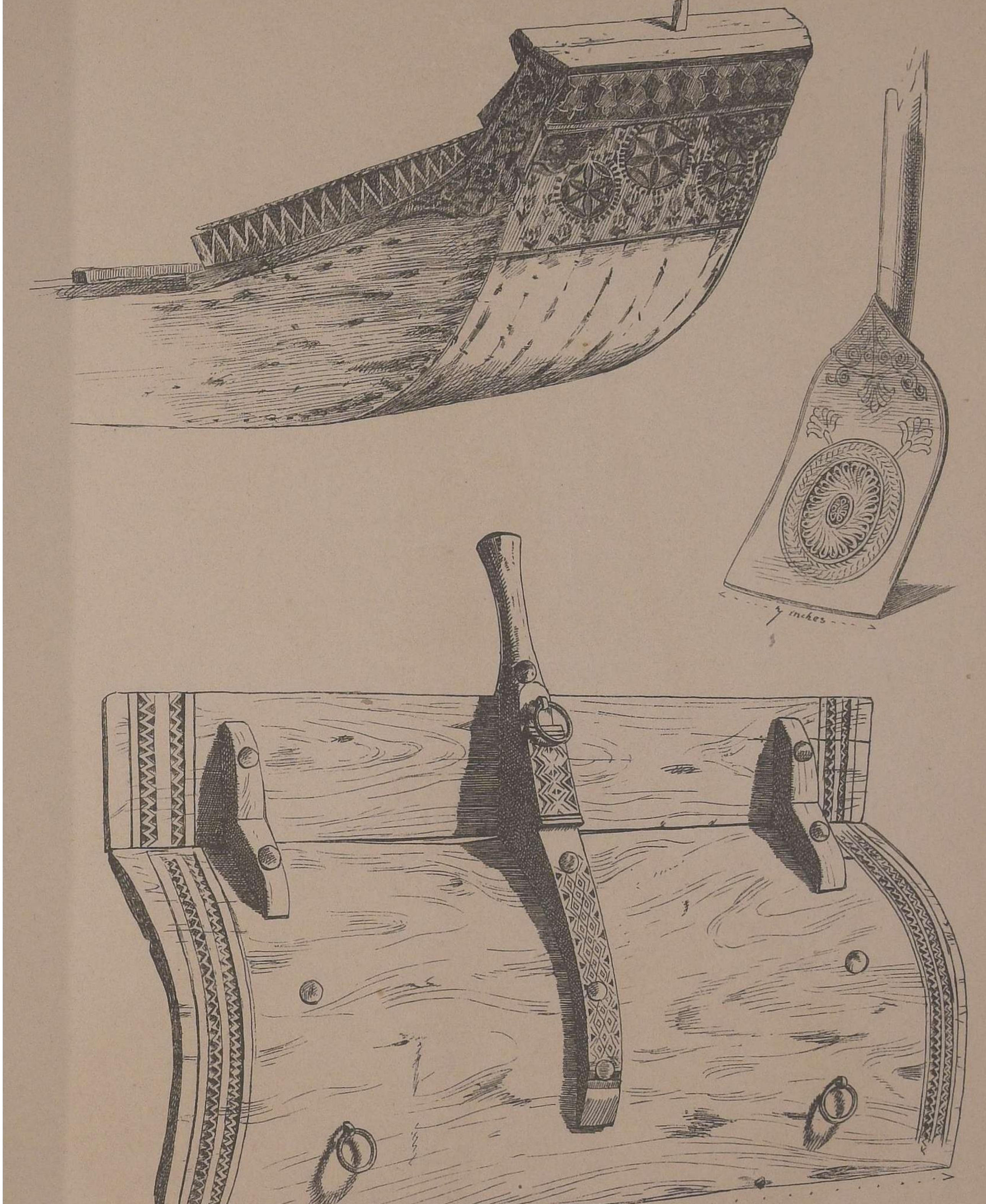
SURAHI, SILVER RAISED ENAMELLED. LUCKNOW. HUSAIN ALI ENAMELLER.



RUSTIC ORNAMENTATION.

—ARMORIAL CHINA.—

NO work has yet appeared giving in colour an illustrated account of the specimens of Armorial China, which still remain in the possession of many of the Nobility and Gentry of this Country. It has been suggested that a work containing Fac-similes of some of the finest examples would be of interest to many. Several of these have already been placed at my disposal by G. Milner-Gibson Cullum, Esq., Miss ffarington, A. W. Franks, Esq., M.A., F.S.A., Granville Leveson-Gower, Esq., F.S.A., J. J. Howard, Esq., LL.D., F.S.A., Lord Scarsdale, Lieut.-Colonel Arthur M. Warde, Lord Jersey and Chas. F. Cole, Esq.

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1811

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Sanctioned by the Science and Art Department of the Committee of Council on Education, South Kensington Museum.

PORTFOLIOS OF INDUSTRIAL ART.

It is proposed to issue a series of Photo-Chromo-Lithographic representations of various examples of Industrial Art, chiefly selected from the South Kensington Museum Collections. The process adopted, that of MR. WILLIAM GRIGGS, enables not only the form and details of the examples to be reproduced, but also the outlines of the colours to be indicated, and thus furnishes, at a very moderate cost, a more accurate and effective representation than could be otherwise obtained.

The Lords of the Committee of Council on Education have sanctioned this undertaking, and have authorized MR. GRIGGS to take examples from the extensive collections of the South Kensington Museum, in the belief that the work will prove of value and interest not only to the students in the Schools of Art connected with the Science and Art Department, but also to many others engaged in various branches of Industrial Art, and to the general public.

The work will appear at intervals in parts, each containing two plates, imperial quarto, in an Illustrated Wrapper, price One Shilling.

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,,	ii	A Spinning Wheel in the Hills A Loom in the Hills
,,	iii	Jeweller setting Stones Muslin Turban Weaving
,,	iv	Warping Gold Wire Winding Gold Wire
,,	v	Silk Weaving Silk Weaving
,,	vi	A Carpet Loom A Carpet Loom
,,	vii	Embroidering in Gold Embroidering in Gold
,,	viii	Jewelled Cloth Embroiderer Floor Cloth Making
,,	ix	Flattening Silver Gilt Wire Kullabatoon Making
,,	x	Gold Lace Making Gold and Silver Lace Making
,,	xi	Arch of a Mosque Screen. *Ajmere* Trellis Window. *Ahmedabad*
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PART	i	Silk Fabrics. *Printed in colors*

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PART	i	Velvet Fabrics

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